Lohengrin II

OWNER'S MANUAL

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Safety Instructions

In these safety instructions the word "product" refers to the Verity Audio LOHENGRIN II and all its accessories.

1. Read Instructions - All the safety and operating instructions should be read before the product is operated;
2. Retain Instructions - The safety and operating instructions should be retained for future reference;
3. Head Warnings - All warnings on the product and in the owner's manual should be followed;
4. Follow Instructions - All operating and maintenance instructions should be followed;
5. Cleaning - Unplug this product from your power amplifier before cleaning. Do not use liquid or aerosol cleaners. The product should be cleaned only as recommended in this manual;
6. Accessories - Do not use accessories not recommended in this manual as they may be hazardous;
7. Water and Moisture - **Hazard of electric shock** - Do not use this product near water or in rainy / moist situations;
8. Heat - Avoid placing the speakers near a heat source;
9. Placing or moving - does not place on an unstable cart, stand, tripod, bracket, or table. The product may fall causing serious injuries, and serious damage to the product. A product with cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product cart combination to overturn;
10. Power amplifier - **Hazard of electric shock** - Do not manipulate, move, clean or disconnect your product while your power amplifier is turned on;
11. Moving when Packed - The product comes packed in two double cardboard boxes. These boxes are heavy and cannot be carried by a single person. Attempting to move a transportation box alone could cause serious injuries;
12. Spikes - The underneath product spikes assure a tight coupling with the floor. They are razor-sharp and must be manipulated with extreme care. Do not move the product while the product spikes are installed. The product spikes should be removed before moving the product;
13. Input power - To reduce the risk of fire or electric shock, do not allow an input power over 150 watts rms (30.0 volts rms) to the product;
14. Unpacking and Packing Instructions - The product should be packed and / or unpacked only as indicated on the packing/unpacking instruction sheets;
15. Ancillary equipment - Do not connect or play the product before making certain that the associated equipments are in good condition;
16. Object and Liquid Entry - Never push object of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Do not spill liquid of any kind onto or into the product;
17. Servicing - Do not attempt to service the product yourself. Refer all servicing to qualified service personnel;
18. Damage Requiring Service - Turn off your power amplifier(s) and disconnect all cables from the product, and refer servicing to qualified service personnel under the following conditions:
    a. When the product exhibits a distinct change in performance;
    b. If any liquid has been spilled into, or objects have fallen into, the product;
    c. If the product has been exposed to rain or water;
    d. If the product does not operate normally even if you follow the operating instructions. Connect only your product as recommended in your owner's manual. Improper connections may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation;
    e. If the product has been dropped or the cabinet has been damaged.
19. Replacement Parts - When replacement parts are required, make sure the service technician use only original parts as specified by Verity Audio. Unauthorized substitution may result in fire, electric shock or other hazards;
20. Safety Check - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in safe operating order.

Your product is a passive device. Risk of electric shock is only possible when it is hooked up to a power amplifier.

To reduce the risk of electric shock, do not expose this product to rain or moisture.

To reduce the risk of electric shock, do not open the product and remove no user serviceable parts inside. Refer servicing to qualified personnel.

Do not make any changes or modifications to the product unless otherwise specified in this manual. If such changes or modifications should be made, you could be required to stop operation of the product or lose your warranty privileges.

Using this Manual

Please take the time to carefully read this instruction manual prior to installation or use of your LOHENGRIN II loudspeaker. Your reading efforts will be rewarded by the satisfaction of getting a full performance achievement and a long service life. We believe that a thorough understanding of your new loudspeakers can save you a lot of anxiety.

This manual will guide you for setting up and operating your loudspeakers and will teach you how to unpack, repack, clean and service your product. Furthermore, we have included a few informative sections for the benefit of your own LOHENGRIN II familiarization.

We are pleased to count you among the most privilege owners of a unique product that will yield a very enjoyable experience for years to come.

Product Overview

Your new LOHENGRIN II is a mature-engineered high-quality audio component. The LOHENGRIN II brings a substantial improvement to any audio system and gives its full potential when associated with the finest ancillary equipment.

The LOHENGRIN II represents the pinnacle of Verity's design. Its cabinet is constructed in a way so that the various panels have been joined in order to create a structure free from any mechanical impedance mismatch. It uses carefully selected quality components that integrate harmoniously in an ultra wide range and wide dynamic loudspeaker that will give hours of enjoyment.

The result is a high-quality loudspeaker that gives a great sense of liveliness, scale, and presence in the listening space. Your LOHENGRIN II, without any doubt, will sound naturally even throughout a wide frequency spectrum and dynamic range.

Features and Benefits

The LOHENGRIN II's ability to reproduce music with a high degree of sound intelligibility comes from many useful features.

Consistent Uniformity
Very strict and sophisticated Verity Audio CAMJ system (computer aided matching) provides a wide soundstage imaging stability.

Effortless Neutrality
Proprietary low-distortion, high-headroom transducers with highly inert cabinet topology allows for a great musical integrity.

Graceful Adaptability
Modest-size cabinets make the installation easy and effective in any environment.

Long-lived Reliability
Strong manufactured components with high-reliability finishing for years of enjoyment.

Spacious Bottom-End
Outstanding transducer displacement uniformity along with a unique cabinet tuning offers a dynamic and full-bodied bass performance.

Exquisite Finishing
Splendid Italian finishing of sumptuous brilliance and impeccable coating that will last for years.

Compact Design
Accommodating size with no performance impairment that grants dazzling sound in any listening environment.

All these features synthesize Verity Audio's commitment for bringing the music back to its essence: *Pure and exalted* emotions.

Description

The Verity Audio LOHENGRIN II loudspeaker will give outstanding results with a wide variety of equipment. They have been designed to offer outstanding performance in moderate size rooms. Their design renders a highly accurate and focused image, an amazing blend of lightning speed and sweetness as well as a cathedral soundstage.

LOHENGRIN II

The LOHENGRIN II is a 3.5-way system. The rear-firing woofer of your LOHENGRIN II loudspeaker reproduces low

frequencies up to 80 Hz while the front firing woofer extend up to 400 Hz; the midrange driver reproduces the frequencies from 400 to 4 kHz. The crossover used in your LOHENGRIN II is a mix of 1st. order between the woofer and midrange units and 3rd. order between the mids and high frequency units.

Just like all Verity Audio loudspeakers, The LOHENGRIN II works with the room reinforcement characteristics to produce quick and solid bass performances. Despite its relatively small size, the LOHENGRIN II loudspeaker provides a low frequency extension down to 16 Hz.

The midrange woofer unit has been optimized for maximum cone rigidity without breakup resonance. This special unit is offering a low level of distortion, extended dynamics range, high-power handling, and simple dividing network.

Lohengrin II integrates Verity's own designed and manufactured ribbon tweeter. This tweeter gives extended, natural and resonance free reproduction of the harmonic content of all musical instruments. These units have been integrated with a very carefully designed crossover that allows each driver to deliver its full potential. Moreover, all components used are carefully computer-matched and indexed to enable optimum sound staging performance.

Packing and Unpacking

Before they left the factory, your LOHENGRIN II cabinets passed an exhaustive quality control procedure to guaranty their genuine state. Please observe carefully the following unpacking instructions for maximum product safety. Once your LOHENGRIN II cabinets will be unpacked, inspect them carefully for any physical damage. If any transit damage can be noticed, please notify your dealer immediately and request the carrier's name so a written claim can be initiated.

Your LOHENGRIN II comes packed in four ATA (Air Transportation Association) approved flight cases with all the necessary protection accessories. For transportation purposes, we strongly recommend you to keep and store all your packaging hardware.

Unless the carrier is notified promptly and all the shipping cases are available for inspection, the right to claim can be forfeited.

Installation

This section depicts how to assemble and connect the LOHENGRIN II loudspeaker.

To identify a proper location for the installation of your LOHENGRIN IIs, please refer to the *Room Placement* section of this manual or follow the recommendations of your dealer.

Once the speakers are properly installed, connect them to your amplifier by using quality speaker cables. Make sure that polarities are respected at both ends and that your cables are installed in the proper direction. The positive input is identified by a red dot located on the connector plate.

> ⚠ *Over tightening the connectors could cause permanent damage.*

For vacuum tube equipment that has multiple output impedance taps, the four-ohm taps should provide the best interface with the LOHENGRIN II.

Room Placement

Indoors, acoustic intelligibility is of great concern for a variety of reasons. It requires low background noise levels and "good" acoustical design. In any room, the reverberant sound pressure level increases as the acoustic power increases and decreases as sound absorption in the room increases and / or sound power flows from the room. The sound field in a room is composed of two parts, the direct field and the reverberant field.

The complex theories of physical acoustics, the uncertainties in predicting the property variations of both natural and manufactured room materials, and the none negligible effects of painting, sealing, bracing, furring, and draping all keep the specification and prediction of room acoustics from being an exact science. Adding together, loudspeaker characteristics, the auditory personal taste and ergonomics make, by practical means, the equation impossible to solve. The frequent need to evaluate the final result by listening rather than by purely quantitative methods gives acoustical tuning a somewhat subjective aspect.

Nevertheless, knowing what the LOHENGRIN II is capable to do will be your major asset in establishing the best setup for your loudspeaker. Here are a few simple rules that will guide you. A good setup will give you fast transients from bottom-end to top-end, proper image height and a wide and deep soundstage.
The following guidelines are based on our own experience with the LOHENGRIN II. We recommend you to start with these and later on (after getting familiar with your

LOHENGRIN II) bring your own modifications that will optimize your setup.

First, the distance from the rear wall to the speaker front baffle of your speaker (midrange center) should be equaled to the height of your room times 0.62. Then follow the following instructions according to your own room characteristics:

1. **Your sitting position will be within ten feet (3 meters) from your loudspeakers**
   Your setup will be according to the equilateral principle. To form an equilateral triangle, the angle between you and your two speakers shall be 60 degrees. If you cannot evaluate it, simply measure the distance from the center of your speaker front baffle to your listening position. Then, adjust the distance between your two loudspeakers to the same value.

2. **Your sitting position will be more than ten feet (3 meters) away from your loudspeakers**
   The width of your room divided by 3.6 will give you the distance from the sidewall to the center of the front baffle of your speakers.

We suggest that you start with the speakers aligned directly at you. Then open them slowly until you get the best soundstage without losing too much center-stage definition. In most cases, the left speaker should be aligned toward your left shoulder and the right speaker should be aligned toward your right shoulder. Opening them will improve your image width and closing them will improve your image center definition. Conversely, if you wish to broaden your listening area, tow them in even more until they are aligned with your opposite shoulder.

Room Treatment

The LOHENGRIN II gives its best performance in an average-furnished domestic listening room. It requires a minimum of room treatment. Before investing in room treatment we strongly recommend you to take the time to listen and get familiar with your speakers. The LOHENGRIN II has proven to be a standalone loudspeaker that rarely needs to be acoustically corrected. A good room placement is usually the most effective approach.

You should always start to position your speakers without any treatment. If speaker positioning cannot solve standing waves or reverberation problems read the following.

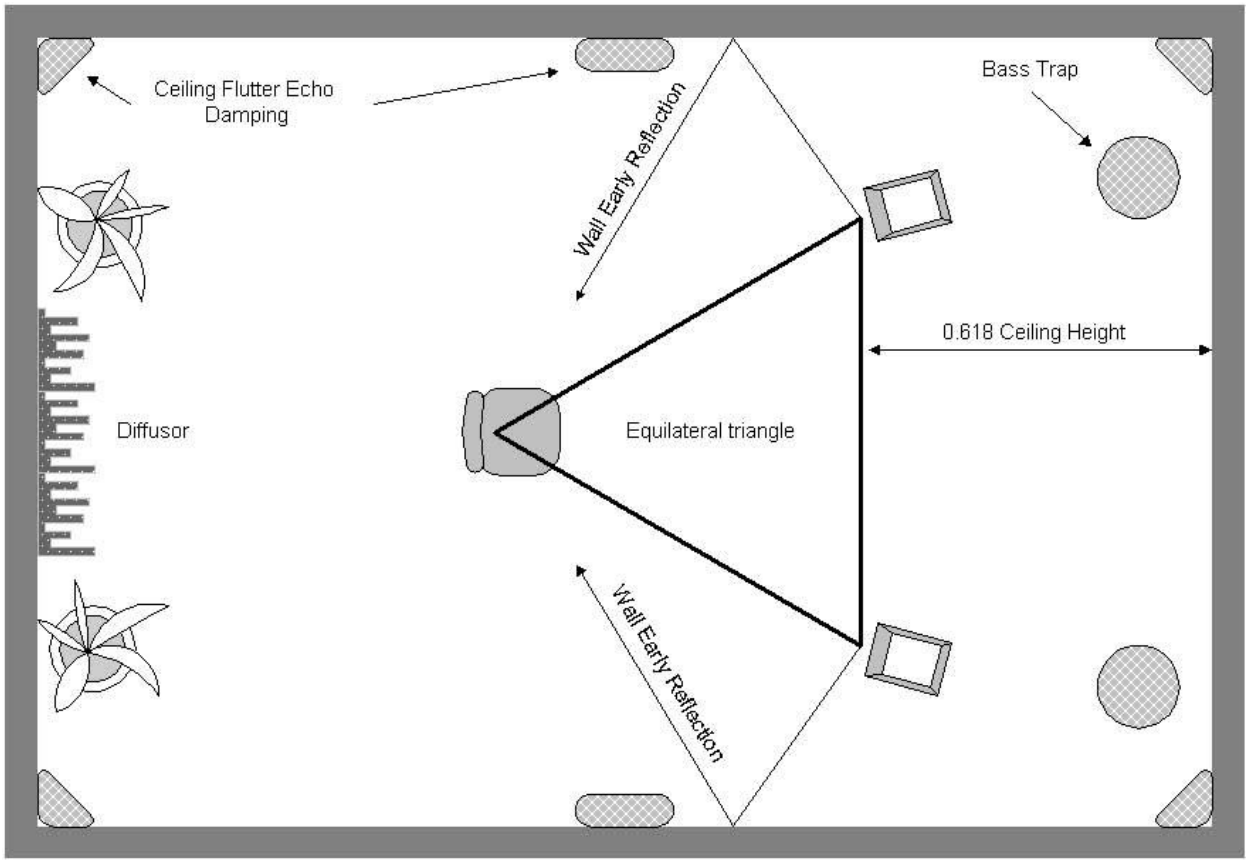

Figure 1 Room placement method number 1 and different room treatment devices

The principal design factor for internal acoustics of a room, in addition to shape and size, is the control of sound absorption and reflection. The total absorption required to give optimum reverberation is inherent to your room characteristics, i.e., which surfaces are absorptive or reflective, the area of these surfaces and the selection of acoustical materials.

A ***flutter echo*** is a rapid (usually regular) succession of reflected pulses resulting from a single pulse. Clapping your hands while walking in the room can easily identify them. They are frequently located at the ceiling corners or at the center of the ceiling-wall intersections. If flutter echoes are prominent, please consult your dealer to get proper assistance on that matter.

The ***reverberation*** in the room is the resulting tendency for sound level in the room to persist after direct sound ceases. The optimum reverberation time for a room depends upon room volume, sound frequency, and the type of sound or reproduced music. The LOHENGRIN II performs at its best in lively listening rooms. Overly damped room will be detrimental to the LOHENGRIN II's performance. Optimum reverberation time (at 500 to 1,000 Hz) should be between 0.4 and 0.6 second.

Standing waves are reflections from opposing parallel surfaces resulting in serious peaks in the reverberation-time / frequency curve. In properly proportioned rooms, resonances can be effectively reduced and standing waves practically eliminated by introducing numerous sound treatment devices. The object is to prevent sound reflection from going back to the point of origin until after several reflections and/or after being considerably attenuated. Once again if you feel having a standing wave problem in your room, please consult your dealer to get proper assistance on this matter.

Early reflections are the first sound reflections heard at the listening position. They are usually intense and annoying. In order of importance, they usually come from the floor, the sidewalls and the ceiling. Placing diffusors or absorbers at their image location can either control them. Your dealer can be of good assistance in properly helping you with this matter.

In an already well-damped room, we recommend utilization of diffusion instead of damping.

If you choose to work with a specialized room treatment device, the included manufacturer's instructions should be followed.

Ancillary Equipment

Your new LOHENGRIN II is an extremely precise instrument that can clearly reveal the qualities of your upstream equipment. Your LOHENGRIN II performance will be closely related to the excellence of its associated equipment. Subsequently, it would be wise to invest in high-quality ancillary equipment as your enjoyment will be consequently rewarded.

The LOHENGRIN II shows an easy impedance load for most power amplifiers. It has been evaluated with a wide variety of power amplifiers and has shown consistent results with quality solid state and vacuum tube equipment. Superb performance can be realized from either design.

The uniquely designed and manufactured binding-posts on the Verity Audio LOHENGRIN II accept banana plugs, spade connectors or bare wires. For best results, we recommend the use of spade connectors.

When choosing speaker cables, experimentation is the best way to find which ones will be the most satisfying in your installation. Your Verity Audio Dealer can be of assistance in making recommendations.

Power Handling

The power tolerance of a loudspeaker is correlated to its maximum voice-coil heat dissipation and to its maximum cone displacement. These parameters are in turn stimulated by the time, amplitude and spectral characteristics of the applied musical energy. At low frequencies, the maximum cone displacement is normally reached before maximum voice-coil temperature.

With the LOHENGRIN II's transducers, because of their superior ventilation system, the voice-coils will most likely never reach critical temperatures. But, low frequencies played at high levels can ask for larger cone displacement than allowed by the driver suspension. A driver reaching its maximum displacement will not break unless this situation is maintained for an inordinate period of time. Before a driver reaches its maximum displacement, its distortion level will increase greatly and will become audible. So when a speaker starts sounding bright and hard or if any "cracking noise" can be heard, just lower the level until it sounds comfortable again.

The LOHENGRIN II has to be played unexpectedly loud before any occurrence of compression or distortion appears.

Cabinet Resonance

Cabinet resonances are controlled in a very special way. Their amplitudes are lowered and their frequencies are increased. Because higher frequencies are more directional, it will be most unlikely that they get the chance to reach the listening point. Of course, the listening room has to be properly treated. Also, traveling high-frequency sonic waves attenuate faster than their low frequency counterpart. A unique cabinet bracing arrangement can break a wall resonance into multiple higher frequency resonances that are not harmonically related. By doing so, their amplitudes are greatly reduced. The cabinet construction tolerances are so tight that only computer-controlled tooling can cut panels with acceptable accuracy.

The cabinet rigidity lowers even more any chances of coloration caused by unwanted vibrations. Special materials are used to ensure stability of the cabinet in any acoustical environment.

Care of the Finish

The black piano finish available for the LOHENGRIN II is composed of high-grade Italian lacquer. You will only find them on luxury pieces of furniture. They are long-lasting finishes and need little care.

Never use any solvent or abrasives to clean your speakers. To remove fingerprints, use a lint-free cloth moistened with a few drops of water.

Use a clothes brush to clean the black velvet front panel. A transparent packing tape works also very well.

The Verity Audio direct gold-plated solid-copper binding posts have been specially designed to introduce a very low impedance path for high-power signals. To keep it at its best, we recommend cleaning them every year with one of the special contact cleaners available on the market. The best results can be obtained from products that have been specially formulated for gold-plated connectors.

Maintenance

Verity Audio products are offering years of trouble-free performance. If for any reason, your speaker needs servicing, contact your authorized Verity Audio dealer or call the Verity Audio service department at ***(418) 682-9940*** (North America) or email us at ***support@verityaudio.com***. Help is available from Monday through Friday from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), except on holidays.

If you seem to have an operational problem, try to solve it by referring to the information in the *Troubleshooting* section of this manual. If you cannot quickly resume normal operation, contact Verity's experienced support personnel at the above phone number.

Before contacting your Verity Audio authorized service representative, make sure you have the following information in hand.

- Serial numbers
- Place of purchase
- Nature of the problem
- Steps you have taken to solve the problem and the obtained results

A return authorization number is required for servicing any of our products and it should be clearly identified on the packaging before any shipment to our facilities. ***Every unit shipped without return authorization number will be returned to sender.***

Attempting to repair the product by non-authorize technicians may void the warranty.

Troubleshooting

This section describes how to solve common problems you may encounter when using your loudspeakers. Many problems have simple solutions, so try these suggestions before you call your dealer or Verity Audio support (see the *Maintenance* section of this manual).

This section contains problems and solutions related to the operation of your hardware. Try the solutions in the order listed within each section.

OPERATIONAL PROBLEMS

Make sure:

1. all your audio apparatuses are plugged into a power source and turned on. Their respective power light indicators should be on;
2. every interconnect cable is connected properly and firmly;
3. every interconnect cable conduct signal normally;
4. your audio equipment selectors and controls are suitably adjusted (source selector, volume control(s), mute selector, etc.);
5. your software (CD, LP, Tape etc.) is properly installed and currently running;
6. the connections are secure and there are no leads touching each other. See the *Installation* section for details about connecting your loudspeaker.

SONIC PROBLEMS

Make sure:

1. every transducer is currently working and that none of them seems to make any abnormal noises;
2. all polarities are respected and that all cables are properly installed;
3. every transducer is properly sealed and that no air leak seems to occur around the transducers while playing.

The sonic performance is closely related to your room inherent characteristics, your speaker positioning and your ancillary equipment. We recommend that you experiment with these to find the best solution. For help, contact your dealer or your Verity Audio service representative at ***(418) 682-9940*** or email us at ***support@verityaudio.com***.

Customer Support

Verity Audio provides customer support and service for all Verity Audio products. If you have any questions regarding your new loudspeaker, call the Verity Audio help desk at ***(418) 682-9940*** or email us at ***support@verityaudio.com***. Help is available Monday through Friday from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), except on holidays.

If you seem to have an operational problem, try to solve it by referring to the information in the *Troubleshooting* section. If you cannot quickly resume normal operation, contact your dealer or Verity's experienced support personnel at the help desk.

Specifications

LOHENGRIN II

Specifications

Bandwidth:	15 Hz to 100 kHz ∀ 3.0 dB
Woofer:	15- inch - symmetrical drive unit – doped polypropylene cone
Upper Bass:	9- inch - symmetrical drive unit – doped polypropylene cone
Midrange:	5- inch - symmetrical drive unit – doped polypropylene cone
Tweeter:	2-inch –wide bandwidth – pure aluminum ribbon
Power handling:	500 watts music power
Sensitivity:	95 dB @ 1w @ 1 m
Nominal impedance:	8 ohms
Minimum impedance:	4 ohms
Mechanical Isolation:	Verity Audio – floating mass platfoarm
Break in time:	150 hours (63%), 750 hours (99%)

Dimensions & Weights

Height:	60 in. (152 cm)
Width Front:	11,5 in. (29.6 cm)
Width Back:	19 in. (48.5 cm)
Depth:	24 in. (60.5 cm)
Weight:	500 lbs (227 kg) / pair
Gross weight:	730 lbs (332 kg) / pair

Features

Connectors:	Custom • gold-plated • removable posts
Isolation cone:	Custom • solid brass with s.s. Lockable spikes

Available finishes

Standard	High-gloss black piano
Special Order	High-gloss silver & High-gloss wood finishes

Limited Warranty

Verity Audio products are covered by a limited warranty against defects in material and workmanship for a period of five years from the date of shipment to the authorized Verity Audio dealer.

The product shipped for services under this warranty shall be delivered by the owner, along with a return authorization number clearly written on the box. Products shipped without return authorization number will be refused.

The included warranty registration card should be properly filled and returned to the factory within ten (10) days from the date of purchase.

Damages resulting from negligence, misuse or accident, improper repair procedures or alterations, or operation that is contrary to the manufacturer's instructions are excluded from this warranty.

Verity Audio reserves the right to modify or change the equipment, all or in part, at any time, in order to include any refinements deemed appropriate by Verity Audio.

This warranty is expressly in lieu of all other warranties, expressed or implied and all other obligations or liabilities on the part of Verity Audio. No other person (s), including dealer, agent or representative are authorized to assume for Verity Audio any liability on its behalf or on its name except to refer purchasers to the present warranty.

Verity Audio liability to any purchaser shall be to replace any part of the product itself because of defective materials or workmanship, and Verity Audio shall not be liable for any consequential damage as a result of defects in material or workmanship.

Notes